ON THE *THYSANOPTERA*
OF THE BOTANICAL GARDENS, BRUSSELS.

By Richard S. Bagnall.

During my frequent though short visits to Brussels last year I collected a number of *Thysanoptera* from the hot-houses in the Botanical Gardens, comprising eight species in all.

Of these, *Heliothrips hæmorrhoidalis* (Bouché), *H. femoralis* (Reuter), and *Parthenothrips dracænæ* (Heeger), are well-known hot-house species; *Leucothrips nigripennis* (Reuter) was found by Reuter in a hot-house at Helsingfors, Finland, in 1904, and has not, so far as I know, been recorded since; and *Euthrips orchidii* (Moulton) was previously only know from California, U. S. A. *Anaphothrips orchidaceus* (Bagnall), though apparently a not uncommon pest in orchid-houses, has only recently been described, whilst the other two species, *Euthrips longipennis* and *Cephalothrips spinosus* are apparently new to science. Although none of these species have been recorded from Belgium there is a large series of *Heliothrips hæmorrhoidalis* and the variety *abdominalis* (Reuter), in the Museum at Brussels.

THYSANOPTERA

Suborder TEREBRANTIA

Family THRIPIDÆ

Genus ANAPHOTHRIPS Uzel, 1895

1. — **Anaphothrips orchidaceus** Bagnall, *1909*.

Anaphothrips orchidaceus (Bagnall) [1].

This species has long been known to horticulturists as the « Yellow Thrips » or « Yellow Orchid Thrips », and is injurious to various hot-house Orchids. I have noticed it on *Odontoglossum*, *Cypripedium* and *Zygopetalum*.

Distribution. — England and Ireland (R. S. B.). Belgium, on Orchids in a propagating house at the Brussels Botanical Gardens, July 1908, and a single specimen from *Chamædorea fragrans*, December 1907.

Genus LEUCOTHRIPS Reuter, 1904

2. — **Leucothrips nigripennis** Reuter, *1904*.

Leucothrips nigripennis (Reuter) [7].

A small and very distinct species described by Prof. Reuter from the hot-house Ferns *Pteris serrulata*, *P. cretica major* and *P. Vincetti*. Although I had repeatedly searched for *Leucothrips*, it was only in October 1908 that I first had the pleasure of finding it, when it occured to me in numbers on *Davallia*, a genus of Fern allied to *Pteris*, at the Brussels Botanical Gardens.

Distribution. — Finland (Reuter). Belgium, common on *Davallia*, in the large Fern House at the Brussels Botanical Gardens, October 2nd. 1908.

Genus EUTHRIPS Targioni-Tozzetti

3. — **Euthrips orchidii** (Moulton), *1907*.

Euthrips orchidii (Moulton) [5], p. 52, pl. II, fig. 15-18.

This small and pretty species has only recently been described by Mr. Dudley Moulton from four specimens collected by Mr. O. E. Bremner, from Orchids in a greenhouse at Fruitvale, Alameda County, California, U. S. A.

In March and June, 1908, I found single specimens on *Chamædorea fragrans* in the large Palm House, Brussels Botanical Gardens, and in October of the same year I was fortunate enough to find a colony of it on a species of *Ficaria*, which was in close proximity to the *C. fragrans*, as well as several examples from various kinds of Palms. The male and the earlier stages of *E. orchidii* are as yet unknown, but as I have now discovered the species in England I hope, in the near future, to describe the larval and pupal stages at least.

E. *orchidii* is a small species (0.8 mm. to 0.9 mm.) and about four times as long as the breadth of the mesothorax. The general color is lemon-yellow, with the antennæ and legs lighter. The wings do not reach to the tip of abdomen; the upper pair are brown in color, with two light areas, one at tip and the other near base. All the tibiæ have a spine at tip, whilst each hind tibia has a row of regularly set spines commencing at the apex within and occupying about two thirds the length. The inner sense-cone of the sixth antennal joint is longer than in any species I have examined, reaching almost to the apex of antenna.

In general facies and movements this species somewhat resembles *L. nigripennis* (REUT.), in the field, but may be readily recognised under an ordinary Coddington lens by the type of coloration, the brown patches at base of wings showing as two very distinct spots on the pterothorax.

I may add that I have not yet found *Euthrips orchidii* on any species of Orchid or allied plants.

DISTRIBUTION. — California, U. S. A. (BREMNER). Belgium, isolated examples on *Chamædorea fragrans*; common on *Ficaria*, and less commonly on various kinds of Palm, in the Palm House, Brussels Botanical Gardens.

4. — **Euthrips longipennis** sp. n.

♀. — *Length* 0.7 mill. to 0.8 mill., breadth of mesothorax 0.175 mill.

General *color* yellow, eyes black, ocelli crimson.

Head shorter that the prothorax, twice as wide as long, widest across the eyes and constricted behind them; retracted into prothorax; frons slightly depressed at the insertion of the antennæ. *Eyes* large, rounded and strongly protruding, occupying together two thirds the width of the head; pilose; facets large; pigment very deep purple, almost black, granular. *Ocelli* large, sub-approximate, crimson *Maxillary-palpus* three-segmented. *Antennæ* grey, with the basal joints yellow. Joints three to five sub-equal; sixth longer; style less than half the length of the sixth joint, with the segments sub-equal. Sense-cones moderately long, stout and blunt; bristles rather conspicuous, especially the two pairs on the style. *Prothorax*, *pterothorax*, abdomen and legs sparsely covered with moderately long and slightly curved hairs. Two pairs of long, conspicuous bristles at each posterior angle or prothorax. All bristles lightly colored and difficult to detect. Mesothorax broader than either the prothorax or metathorax, with the sides rounded. Sides of metathorax almost parallel. Legs of a lighter color than the body; all tibiæ with a spine at tip, but hind-legs without row of regularly placed spines found in *Euthrips orchidii*. *Wings* considerably longer than the body, over-reaching it at tip; fore-wings uniform greyish brown in color, single rudimentary vein at base, a row of spines along the fore-edge, a short row near base, other spines few and scattered. Shape of wings as in *E. orchidii*.

Abdomen ovoid, tip conical as in *E. orchidii*. Spines on last two segments long and prominent, and the bent spine at each posterior angle of the eighth segment much longer than in *Euthrips orchidii*.

Distribution. — Belgium. Common in the large Fern House, and also in the Palm House, Brussels Botanical Gardens, on species of *Chamædorea*, especially in the flowers and in the leaves of *C. fragrans*.

E. longipennis somewhat resembles *E. orchidii*, but is easily separated by its structure, the rather long, curved hairs which are sparsely set over the whole body and limbs in *longipennis*, the longer and unicolorous wings, the shorter antenna and many other minor differences.

Genus HELIOTHRIPS (Haliday) 1836.

5. — **Heliothrips hœmorrhoidalis** (Bouché), *1833* [2].

Very common in the Botanical Gardens of Brussels and Antwerp, and easily distinguished from *H. femoralis* by the white legs.

Var. **abdominalis** (Reuter), *1892* [6].

With the type form, Brussels and Antwerp.

6. — **Heliothrips femoralis** (Reuter), *1892* [6].

Equally as common as the preceding species, both at Brussels and Antwerp.

Genus PARTHENOTHRIPS (Uzel), 1895.

7. — **Parthenothrips dracænæ** (Heeger), *1852* [4].

In large numbers on *Dracœna*, *Ficus*, etc., Brussels and Antwerp.

Suborder TUBULIFERA

Family PHLŒOTHRIPIDÆ

Genus CEPHALOTHRIPS (Uzel), 1895.

8. — **Cephalothrips spinosus** sp. n.

Length 0.95 mill., width of mesothorax 0.2 mill.

General color yellowish-brown, with irregular splashings of reddish- and blackish-brown.

Head one and one-half times as long as the prothorax; widest across eyes; front evenly rounded, cheeks narrowing from eyes to base of head. *Eyes* rather small: *ocelli* present. *Antennæ* approximate, twice the length of head, stout; yellow, joint four darker in color and joints five to eight grey-brown; joint three longest and broadly clavate, four and five each similar in shape, but gradually diminishing in length; sixth five-sixths the length of fifth; seventh about two-thirds of sixth, and eighth one-half of the penultimate joint. Sense-cones short and blunt, inconspicuous.

Prothorax at base (across fore-coxae) one and one-third the width of head at base; a short knobbed bristle at each anterior angle, and a long one at each posterior angle. Fore legs moderately thickened; intermediate and posterior legs long.

Pterothorax slightly wider than prothorax, almost square. Wings present, extending to the ninth abdominal segment.

Abdomen about as broad as pterothorax, gradually narrowing to seventh segment, and from thence rounded to tube. Segments three to eight with a short and stout outstanding spine at each apical angle, those on segments five, six and seven being especially conspicuous. Bristles long and slender. Tube two-thirds the length of head, terminal hairs short and weak.

DISTRIBUTION.—Belgium; one specimen found by Dr. SCHOUTEDEN on a leaf of *Strelitzia Nicolai*, April 1908, Brussels Botanical Gardens, when we were collecting together.

On account of the long antennæ, and of the strong, lateral, abdominal spines, I have hesitated in placing this species in the genus *Cephalothrips*. My single specimen is however, only mounted in balsam, and difficult to describe as fully as desirable; and I do not at present think it advisable to erect a new genus on the strength of this single badly-mounted specimen.

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